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## **ABSTRACT**

The present invention relates generally to nutritive (e.g., cell culture) medium, medium supplement, media subgroup and buffer formulations. Specifically, the present invention provides powdered nutritive medium, medium supplement and medium subgroup formulations, particularly cell culture medium supplements (including powdered sera such as powdered fetal bovine serum (FBS)), medium subgroup formulations and cell culture media comprising necessary nutritive factors that facilitate the *in vitro* cultivation of cells. The invention further provides such powdered formulations that produce particular or desired final ionic and/or pH conditions upon reconstitution with a solvent. The invention is also directed to methods of production of these formulations, and also provides kits and methods for cultivation of prokaryotic and eukaryotic cells using these formulations. The invention also relates to methods of producing sterile formulations, and to methods for producing dry cell powders. The invention also provides cell, media, media supplement, media subgroup and buffer powders produced by the methods of the invention.